

Appln No. 09/575,174
Amdt. Dated September 3, 2003
Reply to Office action of July 3, 2003

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REMARKS/ARGUMENTS

1. In paragraph 5 of the Detailed Action dated 3 July 2003 the Examiner has maintained his rejection of claims 1-107 under 35 U.S.C 103(a) on the grounds that those claims are unpatentable over Dymetman (US 6,330,976) in view of Heckman et al (US 5,291,243).

In reply, the Applicant disagrees with the Examiner's suggestion that the combination of Dymetman and Heckman would render the claimed simultaneous printing of coded and additional data obvious. Nevertheless, in order to simplify the examination process the Applicant has elected to amend the claims in order to focus upon other features which distinguish its invention from Dymetman and Heckman.

2. Claims 1 and 59 have been amended to define the coded data as being indicative not only of "*a region identity associated with the region*" and "*a plurality of points within the region*" but also of "*an interactive element*." Claims 108 and 109 further define the interactive element as comprising one or more of a hyperlink, a hypertext link, a button, a command, a drawing field, a text field and a signature field.

A number of points are important here:

- (a) The claimed coded data is indicative of a feature that appears in the additional data. That is, there is a direct correlation between the information encoded within the coded data and the additional data that is printed over the top of it.
- (b) As confirmed by the Examiner in paragraph 5 of the latest Office Action, the Dymetman coded substrates are provided by "*a coded substrate supplier*". In col. 11, lines 63 to 65 of Dymetman it says "*A publisher can buy these apparently uniformly white sheets and can print visible markings on them using standard ink.*" It is clear from these passages that the coded substrate supplier does not know, when they are printing the coded substrates, what the publishers are going to print over the top of the coded data. Since nothing about the additional data is known, there is nothing in the Dymetman coded data that is indicative of that (yet-to-be-printed) additional data. In particular, if the additional data, once printed, contains interactive elements such as hyperlinks and buttons, the Dymetman coded data is not indicative of such interactive elements.
- (c) The Dymetman coded data only encodes two types of information: a page identifier and location information. (See col. 12 lines 47 to 53 and Fig. 3). The claimed coded data is not only indicative of a page identifier and location information but it is also indicative of an interactive element. One example of the way in which the claimed coded data may be indicative of this third type of information is via the function flags described on page 14, lines 13 to 19 under the heading "*1.2.1 Tag Data Content*" and via the flag bits shown in Table 1 in that section.
- (d) In order to identify that a user has clicked on a hyperlink, the Dymetman system uses the page identifier to identify a "*digital page*" which corresponds to the physical page (see Figs. 14 and 15) and then uses the location information to determine a part of the digital page that corresponds to the part of the physical page that the user has clicked on. The Dymetman system can then determine that the user has, for example, clicked on a hyperlink (see col. 23, line 10 to col. 24 line 12).

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However, there is no disclosure in Dymetman of any direct correlation between the coded data and the additional data. That is, there is no information within the Dymetman coded data which indicates that the coded data is in an active region. The Dymetman coded data only includes page identity and location information and is therefore only indicative of a position on the coded substrate. The Dymetman coded data is not indicative of an "active region" or an "interactive element."

3. From the above discussion it is clear that:

(a) Dymetman does not disclose coded data that is "*indicative of [an] interactive element*"; and

(b) By teaching pre-printing of the coded substrates, Dymetman teaches away from coded data that is indicative of any of the content of the additional data, let alone any interactive elements.

For these reasons, the Applicant submits that Dymetman does not disclose all of the features of amended claims 1 and 59. Those claims are therefore inventive in light of Dymetman and the Examiner is requested to reconsider and withdraw his obviousness objections to these claims.

4. Since claims 1 and 59 are both novel and non-obvious in light of the citations, the Applicant submits that the dependent claims are similarly non-obvious, since they introduce additional features.

5. The Applicant has not discussed Heckman et al since the Examiner introduced that citation in order to deal with the simultaneous printing issues which have now been removed from the claims.

6. In response to the Examiner's comment that "*Every claim has been examined and the examiner is certain that prior art covers all the limitations in the claims,*" the Applicant respectfully disagrees. Some examples of the claimed features which are not disclosed in either Dymetman or Heckman et al are as follows:

(a) Claim 15: The citations do not disclose any triangular or hexagonal tiles.

(b) Claim 16: The citations do not disclose any stochastically arranged tags within each of the tiles.

(c) Claim 17: The citations do not disclose any first identity data that indicates the tile within which a tag is located. The citations do not disclose position data which indicates the position of a tag within its tile.

(d) Claim 22: The citations do not disclose tags having a ring-shaped common feature.

(e) Claims 27 and 28: The citations do not disclose tags with any perspective features, let alone at least four perspective features which are not coincident.

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(f) Claims 30 and 31: The citations do not disclose any tag elements which are disposed in arcuate bands around a central region of the tag, let alone any concentrically disposed arcuate bands.

(g) Claims 32 and 33: The citations do not disclose tag elements which are dots, let alone dots having a number of possible values.

(h) Claim 35: Although Dymetman does disclose the use of UV ink, neither citation discloses tag elements which define their possible values by the differences in the relative absorption, reflection or fluorescence of electromagnetic radiation of a predetermined wavelength or range of wavelengths.

(i) Claim 47: The citations do not disclose tags which are disposed stochastically upon the surface.

(j) Claim 50: The citations do not disclose tags disposed in a triangular array. If the Examiner disagrees with this assessment, the Examiner is invited to point out the specific column and line numbers in the citations which disclose these features.

7. In response to the Examiner's request in paragraph 2 of the Office Action to insert the filing and grant date of the cross-referenced patent applications, the Applicant has proposed to insert the patent application and patent numbers of those corresponding applications. The Applicant submits that those numbers should be sufficient to enable the unique identification of the cross-referenced applications.

8. The Applicant makes the following additional comments:

(a) On the issue of the obviousness of the Applicant's (previously claimed) simultaneous printing method, the Applicant submits, for the record, that the Examiner has underestimated the complexity of simultaneously printing both machine-readable coded data and visible human-readable data over the top of one another. In particular, the Applicant notes that the assignee of both the Dymetman and Heckman et al patents is Xerox Corporation. The Applicant also notes that the Heckman patent was publicly available more than five years before the Dymetman application was filed. If it really was obvious to combine the Xerox-developed printing technique disclosed in Heckman with the Xerox-developed coded substrate disclosed in Dymetman, then surely Dymetman would have used or referred to the printing technique developed by his fellow Xerox colleague. Dymetman, however, makes no such reference and only discloses pre-printed coded substrates.

Consistent with this point is Dymetman's comment at lines 13 to 15 of column 11:

"...and also keeping in mind that the production of coded substrate will be a process carried out by specialized machines."

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(b) It is clear that typographical errors have been the cause of some of the misunderstandings between the Examiner and the Applicant. From the Examiner's comments on page 6, paragraph 2 of the Office Action of 3 July 2003 it is now clear that the Examiner was actually referring to Figure 4 of Dymetman. The Applicant was given the impression that the Examiner may have been talking about Heckman because he wrote "*Figure 4 shows a security document ...*" (emphasis added) (Page 6, lines 1 and 2 of the Office Action dated 25 November 2003). Since Heckman discloses security documents and Dymetman does not, it is clear at the Examiner did not intend to use the term "*security document*" in that sentence.

In that same discussion of Figure 4 of Dymetman, the Examiner states "*This shows that Dymetman does not teach away from printing both data onto the substrate.*" (Page 6, para. 2, OA 3 July 2003). The Applicant agrees that Dymetman does not teach away from printing both data onto the substrate. The Applicant's point was that Dymetman teaches away from **simultaneously** printing both data onto the substrate.

It seemed (in the OA of 25 November 2002) that the Examiner was suggesting that Figure 4 of Dymetman showed that Dymetman was not teaching away from such simultaneous printing. The Applicant gained this impression from the Examiner's statement "*In response to the applicant's argument that Dymetman et al teaches away from simultaneous printing and teaches separate printing of coded sheets which are then supplied to a publisher, the examiner respectfully disagrees... Dymetman is only providing an example of how the invention could be used. Figure 4 shows a security document where both visible and invisible information are printed thereon. The applicant's argument is not persuasive.*" (Page 5, OA 25 November 2002, under "Final Remarks"). This suggested to the Applicant that the Examiner was using Figure 4 as an example of simultaneous printing. It is now clear that this was not the Examiner's intention.

9. The Applicant notes that the Examiner has made this Office Action final. In light of the above misunderstandings and in light of the fact that the Applicant had to pay US\$930 to continue the Examination of this case, the Examiner is requested to withdraw the finality of the Office Action of 3 July 2003 so that all relevant issues may be fully considered.

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It is respectfully submitted that all of the Examiner's objections have been successfully traversed. Accordingly, it is submitted that the application is now in condition for allowance. Reconsideration and allowance of the application is courteously solicited.

Very respectfully,

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